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Abstract for GUS Academic Summit

Title: Bridging the Gap: Enhancing AI Interpretability for Educational and Healthcare Applications

Abstract:

Artificial Intelligence (AI) is revolutionizing both education and healthcare by enabling personalized learning experiences and advanced medical diagnostics. However, the complexity of AI models often hinders their interpretability, limiting trust and adoption among educators and healthcare professionals. This research focuses on developing model-agnostic explanations for AI systems, making them more understandable and transparent for non-technical users. By leveraging techniques such as feature importance attribution, counterfactual explanations, and rule-based methods, we aim to bridge the gap between complex AI models and domain experts. This approach not only enhances trust in AI-driven solutions but also fosters their effective integration into educational and healthcare settings, contributing to sustainable development goals.

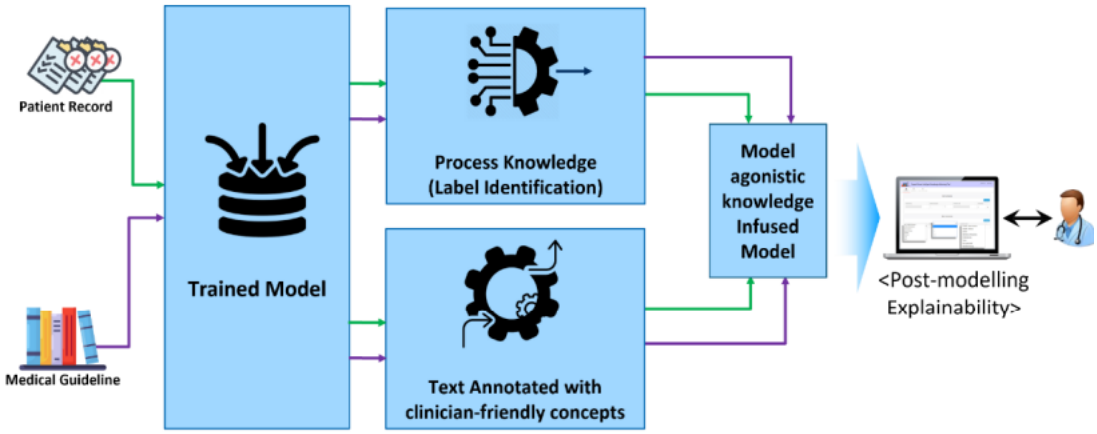

Figure 1 ***Idea Diagram:*** *Key components of the proposed methodology, which takes text and process knowledge as input. The model's primary function is to annotate text fragments with clinician-friendly concepts derived from the process knowledge. Final assessment predictions are generated based on the pertinent process knowledge conditions. This comprehensive approach enhances post-modelling explainability for education and healthcare professionals.*

Stimulating Reflections:

1. How can AI interpretability enhance trust and adoption of AI-driven tools in educational settings?
2. What are the challenges and opportunities in making AI explanations accessible to non-technical users in both education and healthcare?
3. How might improve AI interpretability contribute to the broader goals of sustainable development and responsible citizenship?

Short Bio

Dr., Usman Akhtar is a faculty lecturer with a passion for technological innovation and a steadfast commitment to research in digital health and related domains. He holds a Ph.D. in Computer Science and Informatics from Kyung Hee University, South Korea, and has extensive experience in computational complexity problems, cloud-centric IoT, data acquisition, and Explainable AI. Usman has contributed to impactful international projects and has published numerous articles in high-impact journals. His expertise spans software engineering, parallel and distributed systems, and wellness-based ubiquitous platforms. Currently, he is a lecturer at BSBI, Faculty of Computer Science and Informatics, where he continues to inspire future generations through education and research.